

Looking for the FIP Effect in EUV Spectra

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We present results from a study of extreme-ultraviolet (EUV) off-limb spectra obtained with the Solar Ultraviolet Measurements of Emitted Radiation (SUMER) on the spacecraft SOHO. Using EUV line intensities, we deduce plasma temperatures and densities in the off-limb solar plasma. We make use of this information to study the FIP effect in the solar corona. We have looked for FIP effect in EUV spectra obtained by SUMER in a considerable detail. In particular, we report K/Ar, Si/Ar and S/Ar relative element abundances and investigate the height dependence of the FIP bias in the solar corona. Also, we study the relative Mg/Ne abundance in an active region at the solar limb to investigate the correlation of the FIP bias with magnetic loop structures in the field of view.